

ASHRAE TC 10.7
Commercial Food & Beverage Refrigeration Equipment
Minutes of 2015 Summer Meeting
Atlanta, GA - June 29, 2015

1. Welcome & Introductions

Chairman Brian Fricke welcomed the members and guests and called the meeting to order at 2:18 pm. Members and guests introduced themselves. The Agenda was distributed, and a sign-in sheet was circulated. Fricke reminded everyone that the ASHRAE Code of Ethics must be adhered to by those doing ASHRAE business whether or not the participant is an ASHRAE Member. The Code of Ethics can be found at <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>

2. Review and Revise Agenda

No changes were requested and the agenda was approved.

3. Determination of Quorum

Quorum was established with (10) of eleven (11) voting members present.

4. Scope / MBO's

For the benefit of guests, Fricke read the TC's scope. He referred participants to the Agenda to find details of the TC's objectives.

5. Liaisons & Announcements

- Committee Liaisons were acknowledged and brief announcements were given.

6. Membership

Current Membership was reviewed as listed below:

2014-2015 membership table:

<u>Voting Members</u>	<u>End Date</u>	<u>Leadership Team</u>	
Masood Ali	6/30/2015	Chair:	Brian Fricke
Timothy Anderson	6/30/2018	Vice Chair:	Robert Sperl
David Demma	6/30/2016	Secretary:	Lauren Zelinski
Brian Fricke	6/30/2015	Handbook Chair:	David Demma
Cynthia Gage	6/30/2016	Program Chair:	Caleb Nelson
Charles Hon	6/30/2016	Research Chair:	Shitong Zha
Jon Murray	6/30/2018	Standards Chair:	Van Baxter
Caleb Nelson	6/30/2018	Webmaster:	Kyle Larson
Massoud Neshan	6/30/2015	MTG.LowGWP Liaison:	Brian Fricke
Carl Roberts	6/30/2018		
Lauren Zelinski	6/30/2018		

2015-2016 membership table:

<u>Voting Members</u>	<u>End Date</u>	<u>Leadership Team</u>	
Timothy Anderson	6/30/2018	Chair:	Charles Hon
Pradeep Bansal	6/30/2019	Vice Chair:	Timothy Anderson
Patti Conlan	6/30/2019	Secretary:	Lauren Zelinski
David Demma	6/30/2016	Handbook Chair:	David Demma
Cynthia Gage	6/30/2016	Program Chair:	Caleb Nelson
Charles Hon	6/30/2016	Research Chair:	Shitong Zha
Cesar Lim (NQ)	6/30/2019	Standards Chair:	Van Baxter
Jon Murray	6/30/2018	Webmaster:	Kyle Larson
Caleb Nelson	6/30/2018	MTG.LowGWP Liaison:	Brian Fricke
Gustavo Pottker	6/30/2019		
Carl Roberts	6/30/2018		
Lauren Zelinski	6/30/2018		
Shitong Zha	6/30/2019		

The following members will be rolling off after this meeting and Chairman Fricke thanked them for their contribution to the committee over the past few years. Masood Ali, Brian Fricke, Massoud Neshan.

At this time there are also three new additions to membership of 10.7. The following members agreed to serve starting after this meeting: Pradeep Bansal, Patti Conlan, Cesar Luis Lim, and Gustavo Pottker.

7. Review Draft Minutes from the 2014 Summer Meeting in Seattle WA

Minutes were reviewed and there was no discussion. Motion was made and duly seconded to approve the minutes. VOTE: 10-0-0-1

8. Subcommittee reports

A. Program Subcommittee (Caleb Nelson, Chair)

- Best practices of designing, manufacturing and servicing refrigeration and air conditioning systems- was approved, but not presented.

The following programs were presented in Atlanta:

- Seminar 37 – *Lower GWP Alternatives for R404A in Commercial and Transport Refrigeration* (Tue, 8:00am – 9:30am, Grand Ballroom C)
- Seminar 66 – *Different Methods for Energy Consumption Reduction in Walk-In Coolers* (Wed, 11:00am – 12:30pm, Grand Ballroom D)
- Seminar 56 – *Innovation for Food Retail: The 50% Advanced Energy Design Guide for Grocery Stores* (Co-Sponsor, Wed, 8:00am – 9:30am, Salon C)
- Seminar 63 – *Retrofit or Not? Life-Cycle Strategy for Systems with R-22 and High-GWP Refrigerants* (Co-Sponsor, Wed, 11:00am – 12:30pm, Grand Ballroom C)

Programs for the 2016 Winter Meeting in Orlando:

Best practices of designing, manufacturing and servicing refrigeration and air conditioning systems will be resubmitted by Georgi. **(ACTION 1)** He's looking for an additional speaker for this panel

VOTE: 9-0-1-1 CNV

Improving efficiency of low GWP refrigeration systems – Shitong to resubmit **(ACTION 2)**. TC 3.1, and MTG low GWP will be asked to co-sponsor.

VOTE: 9-0-1-1 CNV

There were no other additional topics currently ready for submittal.

Refrigeration wants to do a seminar with *highlights from 24th IIR International Congress of Refrigeration*. Would be chaired by Van Baxter with USNCIIR sponsoring.

VOTE: 9-0-1-1 CNV

Proposed Ideas for 2016 Summer Meeting in St. Louis:

One conference paper will be submitted by MTG low GWP on *high glide low GWP refrigerants*. This is being co-sponsored by the refrigeration committee and TC 3.1. It was suggested that 10.7 co-sponsor as well. VOTE: 9-0-1-1 CNV

The following topics were suggested and the committee decided to review them again and take a vote in Orlando:

Low GWP – comparing R404a and propane in self contained R22/R404a and HFOs in med and low temp walk-ins

Design of advanced refrigeration systems with lower GWP refrigerants. 10.7 considered cosponsoring this seminar as well. – is also looking for an additional speaker for this seminar.

Session on supermarkets specifically- Comparison of current refrigerants and natural replacements- cost analysis, performance analysis was also suggested for future use.

B. Research (Shitong Zha, Chair)

Project 1467 *Balancing Latent Heat Load between Display Cases & Store Comfort Cooling* needs a paper to be complete. Project leader agreed to submit paper to ASHRAE research in order to complete this project. **(ACTION 3)**

- RTAR 1706 – *Minimum Refrigerant Charge Attainment for Commercial Refrigeration Systems*
- RTAR 1722 – *Optimizing Air Curtains for Refrigerated Display Cases with Glass Doors*

RTARs were both returned with comments. Comments need to be addressed and RTARs either resubmitted or dropped.

RTAR 1706-TC 10.6 will help review and RTAR will be resubmitted prior to September review **(ACTION 4)**
RTAR 1722- Carl to resubmit **(ACTION 5)**.

- WS 1615- *Fault Detection and Diagnostic Methods for Supermarkets*

Was accepted and Project was given to the University of Nebraska- this is now a Research project. Contact David Yuill email: dyuill@unl.edu PH: (402) 554-4176 for more information or to monitor the progress of this project

New Project Ideas:

- *Development of a new infiltration model for walk-in openings*

Daryl and Ramin will check with TC 10.8 **(ACTION 6)**

- *Method of test for secondary fluids with two phase flow entering and/or leaving a display case*

Shitong to follow up with TC 10.1 and TC 3.1 **(ACTION 7)**

- *Demand profile characterization for heat and service hot water in supermarkets*

This was removed.

- *Optimization of air curtains in vertical display cases, incorporating horizontal air streams*

Ramin will write an RTAR **(ACTION 8)**

- *Standard for rating evaporators with high glide refrigerants (with TC 8.4)*

A new idea was proposed for *High glide refrigerants sizing in evaporative condensers*.

Ad-Hoc Group – *New technology assessment and application for energy efficiency in display cases* (J. Murray, C. Roberts, R. Faramarzi) Report will be given at Orlando TC 10.7 meeting **(ACTION 9)**

It was decided that a study of penalty of frost formation and defrost on refrigeration system would be beneficial to the industry as there is not much currently published on frost. Ramin volunteered to write an RTAR on this topic. **(ACTION 10)**

C. Handbook (Dave Demma, Chair)

Dave Demma was not present to provide an update on the handbook. The Refrigeration Handbook was published in 2014.

D. Standards subcommittee (Van Baxter, Chair)

- **SPC-29** (Daryl Erbs)

Erbs reported that ASHRAE 29-2015 was completed and published.

- **SPCs 32.1** (Scott Mitchell) **and 32.2** (Daryl Erbs)

32.1- Two issues still being addressed. Should be finished shortly.

32.2 has been meeting regularly and making progress.

- **SSPC-72** (Charlie Hon)

Reviewing differences from DOE and updates the standard was published. Jon Murray is now Chair and the committee is meeting to discuss technical questions for the next revision.

SSPC 147 is looking at some updates to the current version.

- **SPC-210** (Lauren Zelinski)

The revised title purpose and scope were submitted for approval and work on the standard has begun.

ASTM attended to ask of ASHRAE would look into blast chillers during the Chicago meeting.

Charlie, Van and Scott drafted a TPS for the committees review. It was asked if anyone would be willing to chair or start this committee. Daryl, Scott and Van to see if there is interest from others they have talked to who would be willing to chair or participate in a standard development for this. **(ACTION 11)** Adam Spitz is not an ASHRAE member but volunteered to chair if he doesn't have to be an ASHRAE member. **(ACTION 12).**

The following members would be willing to serve on this SPC if a volunteer was found to chair:

Daryl, Dennis, and Scott.

E. website (Kyle Larson, Webmaster)

Larson was not in attendance. Website appears to be up to date.

9. New Business

Chairman Fricke provided a MTG proposal form from the new *Impact of ASHRAE Standards and Technology on Energy Savings/Performance (MTG IAST)* which is looking for membership. Refrigeration is specifically listed and they are looking for someone from TC 10.7 to serve on the MTG.

Chairman Fricke asked the committee if anyone would be willing to serve on this proposed MTG. Charlie and Van said they might be willing to participate.

9. Adjournment

The meeting adjourned at 3:54 pm.

TC 10.7 ACTION ITEMS

Summer meeting 2014

ACTION #	Responsibility	Summary of Action	Status
1	Georgi	Best practices to be resubmitted	
2	Shitong	Resubmit: <i>Improving efficiency of low GWP refrigeration systems</i>	
3	Shitong	Follow up on paper to complete project 1467	
4	Shitong	Work with 10.6 to resubmit RTAR 1706	
5	Carl	Resubmit RTAR 1722	
6	Daryl, Ramin	<i>Development of a new infiltration model for walk-in openings</i>	
7	Shitong	<i>Method of test for secondary fluids with two phase flow entering and/or leaving a display case</i>	
8	Ramin	Develop RTAR <i>Optimization of air curtains</i>	
9	Ad- Hoc Group	Report in Orlando	
10	Ramin	Write RTAR on Penalties of Frost	
11	Daryl, Scott, Van	Find Chair for Blast Chillers SPC	